

Semiconductor Nanostructures for Optoelectronics Applications

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Semiconductors have played an important role in electronics, computing, communications and solid state lighting. I will discuss about the growth of nanowires and nanostructures of III-V compound semiconductors and their electronic and optical properties. Use of these nanowires and nanostructures for a range of applications such as lasers, LEDs, single photon sources and detectors, THz and NIR photodetectors, solar cells, photocatalysis, sensors and neuronal engineering and signaling will be discussed and future prospects will be presented.